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ABSTRACT

This study controlled the gender context of sentence cues containing nouns and pronouns and asked children to draw pictures depicting the situations described in them. Subjects were 220 elementary students from the fourth, fifth, and sixth grades. Each child drew responses to cues for only one form. The experimenter allowed them 4 minutes per cue to draw a picture of what the child imagined the cue to describe and to name each figure in the drawing. Results indicated that for some of the cues, children drew more male figures in response to the noun "man" than in response to either "individual(s)" or "people." Further analysis also indicated that boys and girls make qualitatively different responses to the cues. Boys drew more male figures than girls and drew more male figures in general. Girls drew more mixed-sex groups and females than boys and drew more of such pictures in general. Future studies on this topic should be cautious not only about the sex of the nouns/pronouns in the cues, but about the sex bias of the context in which these nouns/pronouns are presented. (One figure is included.) (MG)

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EFFECT OF NOUN GENDER ON CHILDREN'S PERCEPTIONS

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Abstract

Studies show that the gender of nouns and pronouns read by children affect their perceptions. No study has controlled the gender context of the sentence cues containing the nouns and pronouns presented. Using neutral cues, 220 elementary school students from the fourth, fifth and sixth grades were asked to draw pictures depicting the situations described in them. Consistent with prior research, children reading cues containing "man" versus "individual(s)" or "people" drew fewer pictures illustrating mixed-sex groups and/or female figures.

Introduction

Daryl and Sandra Bem (1970) coined the phrase "nonconscious ideology" to describe discriminatory practices which are so embedded and accepted in a culture as to be unnoticed. Such may be the case with our use of generic male nouns and pronouns. The use of these has been standard practice for so long that it is done almost reflexively. However, recent studies indicate that such a practice may have some negative consequences. Harrison (1975) attempted to determine what junior high school children visualize when reading male generic terms. She found that male and female subjects consistently drew more male figures for cue statements that used "man," "mankind" and "he" than for cue statements that used "humans," "people," and "they" or "men and women". This suggests that male generic nouns and pronouns elicit images of males more often than they elicit images of males and females equally or of females.

Harrison further supported her findings in a study of elementary school children (Harrison & Passero, 1975). In this study the children were directed to read a cue and circle one of four pictures that best illustrated the given cue. The results suggested that "males and females alike do not readily envision both sexes upon being presented with one of these (male) generic terms...." (Harrison & Passero, 1975, p. 25).

Moulton, Robinson, and Elias (1978) obtained similar findings with college students. Their subjects wrote more often about males in response to a cue sentence containing a masculine generic pronoun than in response to the same sentence containing a neutral generic pronoun.

Schneider and Hacker (1973) assessed the pronoun effect on

college students using a somewhat different procedure. Subjects were directed to collect pictures that should appear with chapter titles in an introductory sociology text. Two lists of chapter titles were distributed, one containing the male generic noun "man" (e.g., "Industrial Man"), and the other, no generic noun (e.g., "Industrial Life"). Consistent with prior studies it was found that pictures including only males were submitted more often by students given male generic titles than by students given unspecified titles. However, the equivalence of the cues "Industrial Man" and "Industrial Life" is questionable. And, the equivalence of several of the other cues is similarly open to question.

Despite a few reservations, the results of all of these studies suggest that male generic terms are not always interpreted generically, but are often associated with males alone rather than with males and females together or females alone. In contrast, Cole, Hill, and Dayley (1983) found no pronoun effect. Using a Sex Stereotype Scale college students rated job descriptions for a "secondary school teacher" and a "recreation worker." The pronouns, "he," "he/she," or "they" were each used in the job description on one of three forms of the scale. Contrary to prior studies, these researchers found little support for claims that masculine generic pronouns lead to images of men. Their results do, however, present evidence that the masculine generic pronoun "he" used in the same job description as the masculine generic noun "man" leads to more masculine ratings of the job description. This finding was dismissed because it did not give evidence for a strict pronoun effect, but rather a combination noun-prounoun effect. Yet, this important result should not be ignored. In actual use, male pronouns are used

more often with other cues, especially male nouns and pictures of males, than in isolation (Bate, 1975).

Irrespective of the findings, it is interesting to note that while these past studies have focused on the gender of nouns and pronouns, none has examined the gender content of the cues in which these nouns and pronouns were presented. The gender content of the cues may interact with the embedded nouns/pronouns to bias the subjects' responses. Or, the content itself may overcome any bias which the nouns/pronouns may cause. For example, a masculine content may hide any changes that masculine versus neutral nouns/pronouns may have on subjects' perceptions. Likewise, a feminine content may enhance the changes in perceptions that masculine versus neutral nouns/pronouns may cause. The question then arises as to the impact, if any, of masuline versus neutral nouns/pronouns given a neutral context. This issue, then, is the focus of the current study.

With neutral cues it is suspected that any impact which gender-related nouns and pronouns may have on subjects' perceptions can be more cleanly isolated. And, should male generic nouns/pronouns be found to have no impact, such a finding could not be attributed to cues producing a consistent bias across conditions. While the use of neutral contexts adds a new dimension to this area of research, it is hypothesized that results from the current study will still be consistent with most of the previous research. Specifically, it is hypothesized that more male than female figures will be drawn in response to cues that use the masculine generic noun "man" than in response to cues that use gender neutral nouns. Furthermore, no significant difference in responses between the sexes is expected.

Method

Fifteen cues were selected and pretested for gender neutrality. The cues discussed prehistoric civilization in order to minimize the effects of previous experience with the topic. Forty-five male and 50 female college students rated the cues on a scale of 1-7, with 1 being highly male associated, 4 being neutral, and 7 being strongly female associated. Seven cues--one rated as masculine, one as feminine, and five as neutral--were selected from the pretest for use on two separate forms. These forms used identical cues but differed in noun reference. Form 1 used the noun "man" in each cue while Form 2 used the nouns "individual(s)" or "people" in place of "man." The directions for the cues in each form asked subjects to "Look at the sentence on this page and draw a picture of what you think the people looked like. Write a name by each person in your drawing." The seven selected cues were:

1. Primitive man (individuals) planting in prehistoric times.
2. Stone age man (individual) nurturing an infant.
3. Prehistoric man (people) gathered on a feast day to celebrate.
4. Primitive man (people) during a night's sleep.
5. Early man (individuals) enjoying a midday meal.
6. Primitive man (individuals) participating in an athletic contest.
7. Gathering of food by primitive man (individual).

The forms were presented to 104 fourth, 61 fifth and 55 sixth graders by a school counselor who served as the study's experimenter.[1]

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[1] Many thanks to Carol Emery for her critical help in this study.

Each child drew responses to cues for only one form. The experimenter introduced each testing session by saying that she wanted to find out what the children thought about prehistoric times. She read the instructions aloud and had the children follow along as she read. After asking the children if they had any questions, the experimenter allowed them four minutes per cue to draw a picture of what they imagined the cue to describe and to name each figure in the drawing. The children were given four additional minutes following the final cue to name any remaining figures and to complete drawings for any of the cues.

The number of drawings containing only male figures, only female figures, and mixed-sex groups was tabulated for each of the forms. The sex of the figures in the pictures was determined by the names the children had given to them.

Results

To directly test the hypothesis for this study, drawings to cues containing male nouns (Form 1) were compared to drawings to cues containing neutral nouns (Form 2). At issue was the question of whether cues containing the noun "man" versus "individual(s)" or "people" elicit more drawings containing only male figures. An initial analysis of cues across forms revealed no difference in the frequency of drawings containing only male versus only female figures. However, when drawings containing only female figures were combined with figures containing mixed-sex groups, analyses revealed several cases in which drawings to Form 1 resulted in more male figures than drawings to Form 2. Specifically, girls drew more male figures for cues 1 and 5 in response to Form 1 than in response to Form 2, $\underline{X}^2(1, \underline{N} = 103) = 5.38$, $\underline{p} < .05$ and $\underline{X}^2(1, \underline{N} = 99) = 9.28$, $\underline{p} <$

.01, respectively. And, boys drew more male figures in response to Form 1 versus Form 2 for cue 5, $X^2(1, N = 86) = 4.62$, $p < .05$.

Aside from comparing drawings across forms, analyses were done examining possible differences between boys' and girls' responses to each cue. Such differences could exist irrespective of any within sex differences across forms. Contrary to expectations, of the seven cues comprising Form 1, four--cues 2, 5, 6, and 7--showed significant gender differences in the types of pictures drawn [$X^2(1, N = 111) = 3.84$, $p < .05$, $X^2(1, N = 97) = 4.93$, $p < .05$, $X^2(1, N = 100) = 7.63$, $p < .01$, $X^2(1, N = 98) = 7.92$, $p < .01$, respectively]. Of the seven cues comprising Form 2, similar differences occurred for cues 4, 5, 6, and 7 [$X^2(1, N = 80) = 5.03$, $p < .05$, $X^2(1, N = 90) = 8.39$, $p < .01$, $X^2(1, N = 88) = 13.24$, $p < .001$, $X^2(1, N = 79) = 11.00$, $p < .001$, respectively]. In all cases, a significant difference indicated that boys were drawing male only pictures more often than girls. Phrased alternatively, girls were drawing mixed-sex groups or female figures more often than boys.

A final analysis focused on the absolute number of male-only and female-only plus mixed-sex pictures drawn by each sex to each cue. While the above analysis indicates that boys draw more male figures than girls, it is still possible that girls (as well as boys) are drawing pictures dominated by male figures. This analysis attempted to assess this possibility. For girls a binomial comparison of male-only drawings to drawings containing mixed-sex groups or females resulted in significant differences for cues 1, 2 and 3 of Form 1 (p's $< .01$, .03, and .002, respectively) and cues 2, 3, 5, and 6 of Form 2 (p's $< .001$, .02, .001, and .02, respectivlèy). Fór boys, significant differences were found for cues 1, 4, 5, 6, and 7 of Form

1 (p's < .004, .009, .001, .001, and .001 respectively) and cues 2, 6, and 7 of Form 2 (p's < .03, .005, and .001, respectively). Cue 4 of Form 2 also reached minimal significance for boys with $p = .05$. Interestingly, of the eight cues showing a significant difference for boys, all but one (cue 2, Form 2) contained more male-only figures than figures of females or of mixed-sex groups. Of the seven cues showing statistical significance for girls, all but one (cue 1, Form 1) contained more mixed-sex groups or female figures than figures of males.

Discussion

Results indicate that for some of the cues, children drew more male figures in response to the noun "man" than in response to either "individual(s)" or "people." This is in agreement with previous research and provides support for the related hypothesis. While many of the cues did not elicit a noun effect, it is important to recognize that the effect occurred at all. Since it isn't possible to predict when a noun effect exists, the wisdom of using generic male nouns seems questionable; at times, children's perceptions of the world may be biased by such noun usage.

Further analyses also indicate that boys and girls make qualitatively different responses to the cues. Boys draw more male figures than girls, and draw more male figures in general. Girls draw more mixed-sex groups and females than boys, and draw more of such pictures in general. However, a closer look at the pattern of these findings reveals an interesting fact. For boys, the percentage of male figures drawn to each cue generally decreases from Form 1 to Form 2. And, the corresponding increase is primarily in the percentage of mixed-sex drawings (see Figure 1). While this change

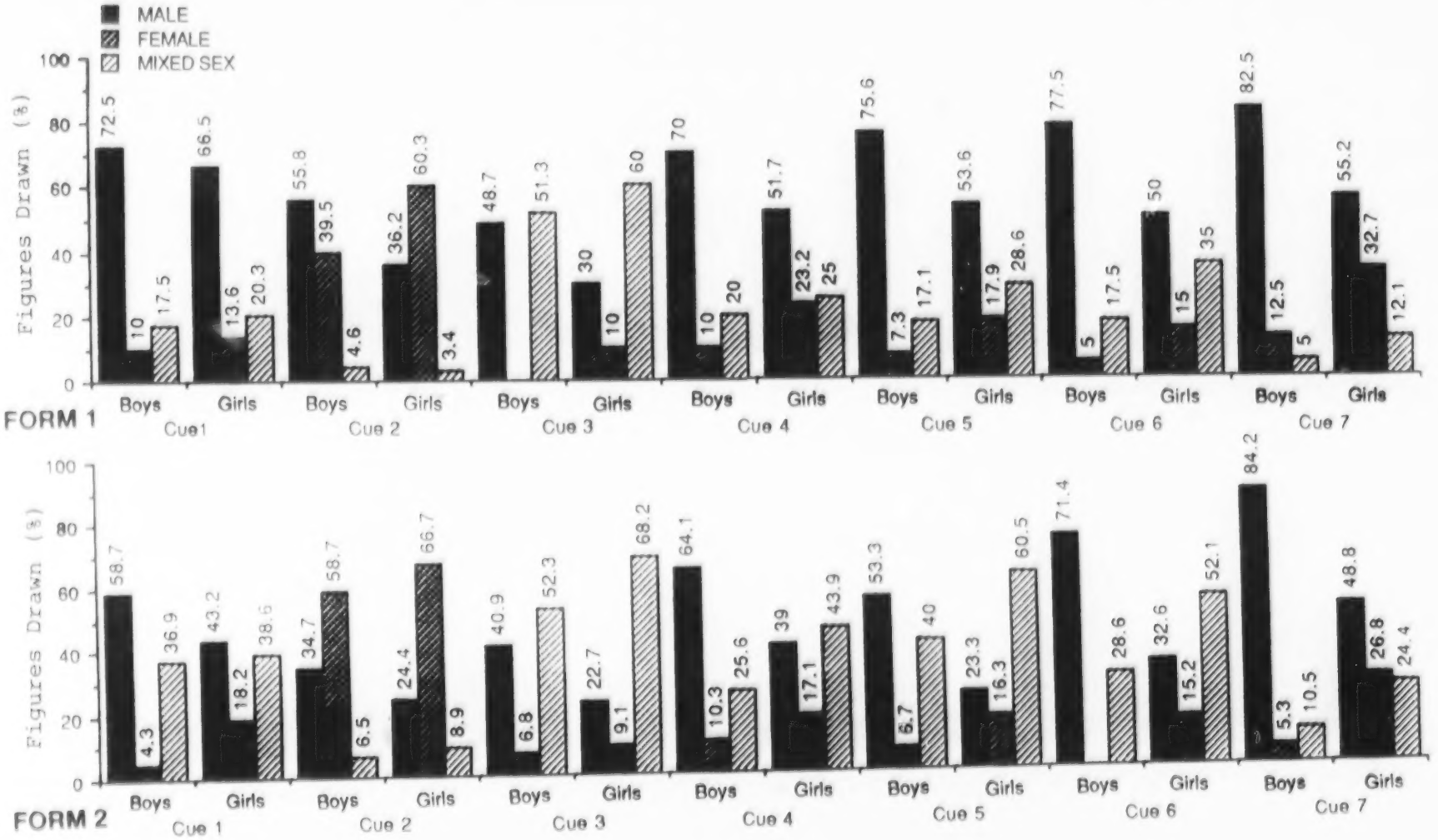

FIGURE 1

PERCENTAGE OF MALE, FEMALE, MIXED SEX FIGURES DRAWN TO EACH CUE

is significant only for cue 5, it is consistent across cues. Similarly, the percentage of mixed-sex and female figures drawn by girls increases from Form 1 to Form 2. This change is significant only for cues 1 and 5. However, the change is again primarily in the direction of an increased percentage of mixed-sexed drawings and the increase is again consistent across cues (see Figure 1).

While these changes are not all statistically significant, the importance of the direction and consistency of these changes should not be ignored. The use of neutral gender nouns in Form 2 appears to foster the drawing of more mixed-sexed groups. And, this effect applies both to boys and girls. Children appear to be egocentric in their drawings, and the use of neutral gender nouns reduces this tendency. Thus, the use of such neutral nouns appears to have benefits for both sexes reducing the gender bias in their perception of the world.

Finally, two gender biased cues were included in this study to examine their impact on the children's perceptions. Cue 2 was rated to be female biased while cue 6 was rated to be male biased. It was suspected that a female cue would enhance the production of more female-only pictures given a gender neutral noun. Figure 1 illustrates that this occurs, but primarily for boys. For a male biased cue it was suspected that the type of noun would not affect picture content; all pictures would predominantly be of males. This turned out to be true, but only for boys (see Figure 1). Girls drew more mixed-sex pictures when a gender neutral noun was used. This pattern of results suggests that, the cues themselves may bias the types of drawings produced, but in interaction with the sex of the subject. More research is necessary to confirm this pattern and to

determine the exact nature of the interaction. But, future studies on this topic should be cautious not only about the sex of the noun/pronouns in their cues, but about the sex bias of the context in which these nouns/pronouns are presented.

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